

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A An isolated polypeptide that suppresses neuronal death associated with Alzheimer's disease having an amino acid sequence of Formula (I):

Pro-Xn₁-(Cys/bXaa)-(Leu/Arg)-Xn₂-Leu-Thr-(Gly/Ser)-Xn₃-Pro (I) (SEQ ID NO: 63)

wherein "Cys/bXaa" indicates Cys or a basic amino acid; "(Leu/Arg)" indicates Leu or Arg; "(Gly/Ser)" indicates Gly or Ser; and Xn₁, Xn₂, and Xn₃ independently indicate arbitrary amino acid sequences not more than 10 residues in length, respectively.

2. (Currently amended) A An isolated polypeptide selected from the group consisting of:

(a) a polypeptide having an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60; and,

(b) a polypeptide that suppresses neuronal death associated with Alzheimer's disease having an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein one or more to five amino acids have been substituted, deleted, inserted, and/or added; and

(c) a polypeptide comprising an amino acid sequence with one or more conservative substitutions of the amino acid sequence selected from the group consisting of SEQ

ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease.

3. (Cancelled)

4. (Previously amended) A fusion polypeptide comprising the polypeptide of any of claims 1 to 2 fused with one or more other polypeptides.

5. (Currently amended) A An isolated DNA encoding the a polypeptide of any one selected from the group consisting of 1 to 2, or a fusion polypeptide comprising the polypeptide of any of claims 1 to 2 fused with one or more other polypeptides:

(a) a polypeptide that suppresses neuronal death associated with Alzheimer's disease having the amino acid sequence of Formula (I):

Pro-X_n₁-(Cys/bXaa)-(Leu/Arg)-X_n₂-Leu-Thr-(Gly/Ser)-X_n₃-Pro (I) (SEQ ID NO: 63)

wherein "Cys/bXaa" indicates Cys or a basic amino acid; "(Leu/Arg)" indicates Leu or Arg; "(Gly/Ser)" indicates Gly or Ser; and X_n₁, X_n₂, and X_n₃ independently indicate arbitrary amino acid sequences not more than 10 residues in length, respectively;

(b) a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60 in which one to five amino acids have been substituted, deleted, inserted, and/or added, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease;

(c) a polypeptide comprising an amino acid sequence with one or more conservative substitutions of the amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease;

(d) a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60; and

(e) a fusion polypeptide comprising the polypeptide of (a) or (d) fused with one or more other polypeptides;

wherein the DNA does not comprise the sequence of SEQ ID NO:4.

6. (Currently amended) A vector into which ~~the DNA of claim 5 a DNA~~ encoding a polypeptide of any one of (a) to (c) is inserted.:

(a) a polypeptide that suppresses neuronal death associated with Alzheimer's disease having the amino acid sequence of Formula (I):

Pro-Xn₁-(Cys/bXaa)-(Leu/Arg)-Xn₂-Leu-Thr-(Gly/Ser)-Xn₃-Pro (I) (SEQ ID NO: 63)

wherein "Cys/bXaa" indicates Cys or a basic amino acid; "(Leu/Arg)" indicates Leu or Arg; "(Gly/Ser)" indicates Gly or Ser; and Xn₁, Xn₂, and Xn₃ independently indicate arbitrary amino acid sequences not more than 10 residues in length, respectively;

(b) a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60 in which one to five amino acids have been substituted, deleted, inserted, and/or added, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease;

(c) a polypeptide comprising an amino acid sequence with one or more conservative substitutions of the amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease;

(d) a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60; and

(e) a fusion polypeptide comprising the polypeptide of (a) or (d) fused with one or more other polypeptides.

7. (Original) A host cell retaining the vector of claim 6.

8. (Currently amended) A method for producing the polypeptide of any one of claims 1 to 2 or a fusion polypeptide comprising the polypeptide of any one of claims 1 to 2, comprising: the steps of

culturing a host cell retaining a vector into which a DNA encoding the polypeptide of any one of claims 1 to 2, or a fusion polypeptide comprising the polypeptide of any one of claims 1 to 2 fused with one or more other polypeptides, is inserted[[,]]; and

recovering [[the]] an expressed polypeptide from the host cell or culture supernatant thereof.

9-12. (Canceled)

13. (Currently amended) A pharmaceutical composition comprising as the effective component the polypeptide of any one of claims 1 to 2 or a vector into which a DNA encoding the polypeptide is inserted.

14. (Canceled)

15. (Previously amended) The pharmaceutical composition of claim 13, comprising an amount of the polypeptide or the vector effective to prevent or treat diseases that are accompanied by neurodegeneration.

16. (Previously amended) The pharmaceutical composition of claim 13, comprising an amount of the polypeptide or the vector effective to prevent or treat Alzheimer's disease.

17. (Canceled)

18. (Canceled).

19. (Canceled)

20. (New) The polypeptide of claim 1, wherein the polypeptide comprises an amino acid sequence of Formula (IV):

Pro-Xn₁-(Cys/bXaa)-(Leu/Arg)-Xn₂-Leu-Thr-(Gly/Ser)-Xn₃-Pro (IV) (SEQ ID NO: 100), wherein "Cys/bXaa" indicates Cys or a basic amino acid; "(Leu/Arg)" indicates Leu or Arg; "(Gly/Ser)" indicates Gly or Ser; and Xn₁, Xn₂, and Xn₃ independently indicate arbitrary amino acid sequences consisting of 3 to 5, 1 to 3, and 3 to 5 arbitrary amino acids, respectively.

21. (New) The polypeptide of claim 1, wherein the polypeptide comprises an amino acid sequence of SEQ ID NO: 101.

22. (New) The polypeptide of claim 1, wherein the polypeptide comprises an amino acid sequence of SEQ ID NO: 102.

23. (New) The polypeptide of claim 2, wherein the polypeptide comprises an amino acid sequence encoded by a nucleic acid sequence having 90% or more homology to a nucleic acid sequence encoding an amino acid sequence selected from the group consisting of SEQ ID NOS: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease.

24. (New) The polypeptide of claim 2, wherein the polypeptide comprises an amino acid sequence encoded by a nucleic acid sequence having 95% or more homology to a

nucleic acid sequence encoding an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease.

25. (New) The polypeptide of claim 2, wherein the polypeptide comprises an amino acid sequence with one or more conservative substitutions of a sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease.

26. (New) The polypeptide of claim 2, wherein the polypeptide comprises an amino acid sequence with one to five conservative substitutions of a sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease.

27. (New) The polypeptide of claim 2, wherein the polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60.

28. (New) The DNA of claim 5, wherein the DNA encodes a polypeptide comprising an amino acid sequence of Formula (IV):

Pro-Xn₁-(Cys/bXaa)-(Leu/Arg)-Xn₂-Leu-Thr-(Gly/Ser)-Xn₃-Pro (IV) (SEQ ID NO: 100)

wherein "Cys/bXaa" indicates Cys or a basic amino acid; "(Leu/Arg)" indicates Leu or Arg; "(Gly/Ser)" indicates Gly or Ser; and Xn₁, Xn₂, and Xn₃ independently indicate arbitrary amino acid sequences consisting of 3 to 5, 1 to 3, and 3 to 5 arbitrary amino acids, respectively, wherein the DNA does not comprise the nucleotide sequence of SEQ ID NO:4.

29. (New) The DNA of claim 5, wherein the DNA encodes a polypeptide comprising an amino acid sequence of SEQ ID NO: 101, but does not comprise the nucleotide sequence of SEQ ID NO:4.

30. (New) The DNA of claim 5, wherein the DNA encodes a polypeptide comprising an amino acid sequence of SEQ ID NO: 102, but does not comprise the nucleotide sequence of SEQ ID NO:4.

31. (New) The DNA of claim 5, wherein the DNA comprises a nucleic acid sequence having 90% or more homology to a nucleic acid sequence encoding an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, but does not comprise the nucleotide sequence of SEQ ID NO:4, wherein the DNA encodes a polypeptide which suppresses neuronal death associated with Alzheimer's disease.

32. (New) The DNA of claim 5, wherein the DNA comprises a nucleic acid sequence having 95% or more homology to a nucleic acid sequence encoding an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, but does not comprise the nucleotide sequence of SEQ ID NO:4, wherein the DNA encodes a polypeptide which suppresses neuronal death associated with Alzheimer's disease.

33. (New) The DNA of claim 5, wherein the DNA encodes a polypeptide comprises an amino acid sequence with one or more conservative substitutions of a sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, but does not comprise the nucleotide sequence of SEQ ID NO:4, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease.

34. (New) The DNA of claim 5, wherein the DNA encodes a polypeptide comprises an amino acid sequence with one to five conservative substitutions of a sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33,

37 to 40, 46, 48, 54, and 60, but does not comprise the nucleotide sequence of SEQ ID NO:4, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease.

35. (New) The DNA of claim 5, wherein the DNA encodes a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 6 to 8, 10, 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60.

36. (New) The vector of claim 6, wherein the DNA encodes a polypeptide comprising an amino acid sequence of Formula (IV):

Pro-Xn₁-(Cys/bXaa)-(Leu/Arg)-Xn₂-Leu-Thr-(Gly/Ser)-Xn₃-Pro (IV) (SEQ ID NO: 100)

wherein "Cys/bXaa" indicates Cys or a basic amino acid; "(Leu/Arg)" indicates Leu or Arg; "(Gly/Ser)" indicates Gly or Ser; and Xn₁, Xn₂, and Xn₃ independently indicate arbitrary amino acid sequences consisting of 3 to 5, 1 to 3, and 3 to 5 arbitrary amino acids, respectively.

37. (New) The vector of claim 6, wherein the DNA encodes a polypeptide comprising an amino acid sequence of SEQ ID NO: 101.

38. (New) The vector of claim 6, wherein the DNA encodes a polypeptide comprising an amino acid sequence of SEQ ID NO: 102.

39. (New) The vector of claim 6, wherein the DNA comprises a nucleic acid sequence having 90% or more homology to a nucleic acid sequence encoding an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the DNA encodes a polypeptide which suppresses neuronal death associated with Alzheimer's disease.

40. (New) The vector of claim 6, wherein the DNA comprises a nucleic acid sequence having 95% or more homology to a nucleic acid sequence encoding an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to

29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the DNA encodes a polypeptide which suppresses neuronal death associated with Alzheimer's disease.

41. (New) The vector of claim 6, wherein the DNA encodes a polypeptide comprises an amino acid sequence with one or more conservative substitutions of a sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease.

42. (New) The vector of claim 6, wherein the DNA encodes a polypeptide comprises an amino acid sequence with one to five conservative substitutions of a sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60, wherein the polypeptide suppresses neuronal death associated with Alzheimer's disease.

43. (New) The vector of claim 6, wherein the DNA encodes a polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NOs: 5 to 8, 10, 12, 13, 21 to 24, 26 to 29, 32, 33, 37 to 40, 46, 48, 54, and 60.

44. (New) The polypeptide of claim 26 having a naturally occurring amino acid sequence.

45 (New) A composition comprising a polypeptide of claim 2 and a pharmaceutically acceptable carrier.